RAYTHEON

TECHNICAL INFORMATION SERVICE

Technical Information

CK7994

SUBMINIATURE TRIODE

The CK7994 is a heater–cathode type, high transconductance triode of subminiature construction. The design features of low noise, low interelectrode capacitances featuring low Cp–K+H, and very high transconductance make this type suitable for service in wide band amplifier stages, and especially grounded–grid operation. The useful frequency range extends from low to very high frequencies. The flexible terminal leads may be soldered, or welded directly to the terminals of circuit components without the use of sockets. Standard 8–Pin subminiature sockets may be used by cutting the leads to a suitable length.

ELECTRICAL DATA

DIRECT INTERELECTRODE CAPACITANCES: (pf) (without shield)

Plate to cathode and heater	0.25 Max.
Input (k to g + h)	8.5
Output (p to g + h)	2.5

RATINGS – ABSOLUTE MAXIMUM VALUES:

Heater Voltage (ac or dc)	6.3 ± 10% Volts
Plate Voltage	200 Volts
Plate Dissipation	2.0 Watts
Cathode Current	30 ma.
Heater–Cathode Voltage	100 Volts
Bulb Temperature	220 °C

CHARACTERISTICS AND TYPICAL OPERATION:

Heater Voltage	6.3 Volts
Heater Current	0.3 Amp.
Plate Voltage	100 Volts
Cathode Bias Resistance	82 Ohms
Grid Voltage	0 Volts
Plate Current	15 mA
Plate Resistance	25 K ohms
Transconductance	18,000 umhos
Amplification Factor	43
Ecl for Ib = 10 uA	−6 Volts

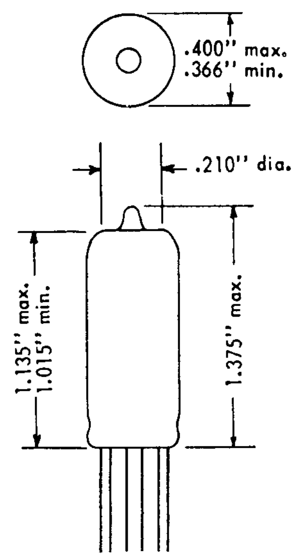
OBJECTIVE DATA

These data identify a particular developmental tube design and the type designation or the descriptive data may be subject to change or abandonment.

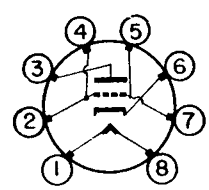
MECHANICAL DATA

ENVELOPE .... T3 Glass
OUTLINE .... JEDEC (3–1)
BASE ..... 8–Pin Submin. Button (0.017" Tinned Flexible Leads. Length = 1.5" Min.)
CATHODE .. Coated Unipotential
MOUNTING POSITION ...... Any

PHYSICAL DIMENSIONS



BASING



TERMINAL CONNECTIONS

Lead 1	Heater
Lead 2	Grid Number 1
Lead 3	Plate
Lead 4	Grid Number 1
Lead 5	Grid Number 1
Lead 6	Cathode
Lead 7	Grid Number 1
Lead 8	Heater

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